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Notes on the flora of Chicago and vicinity. II.¹

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CEANOTHUS OVATUS Desf.—This has recently been found in two localities near the shore of Lake Michigan, Edgemoor and Wilsons, Lake co., Ind. The nearest place where it is recorded as occurring elsewhere is in Winnebago co., Ill., or not far from Beloit, Wis. Three or four localities in the northern part of the southern peninsula of Michigan are mentioned, and according to the recent Catalogue of Ohio Plants by Kellerman and Werner it is found, though rarely, in the northern part of Ohio. Its distribution in the lake region is therefore peculiar, since the stations in Indiana are isolated, and distant from those of Illinois, Michigan and Ohio.

THASPIUM PINNATIFIDUM Gray.—I came across this plant in 1870 growing by the banks of the Kankakee river near Waldron, Kankakee co., Ill. It was at the time confused with *T. barbinode*, a specimen of the former being taken in flower and placed in my collection with one of the latter in fruit, as both grew in the locality. When more carefully examined some years afterward the two did not accord very well in appearance, but the lack of fruit and removal from the neighborhood did not permit a definite determination. In the summer of 1894 I found a *Thaspium* at Momence, Ill., whose fruit differed from that of *T. barbinode*. It was taken from the bank of the Kankakee, about ten miles above the former locality. Another fruiting specimen was obtained from Momence the past season. They have the characteristic fruit of *T. pinnatifidum*, all the ribs being winged, three of them being narrow. The leaves are somewhat intermediate between those of this species and *T. barbinode*. The leaflets are, however, usually much smaller and differently cut and divided into oval or oblong segments. *T. pinnatifidum* has hitherto been given as a plant of the barrens and mountains of Kentucky, Tennessee and North Carolina. Careful inspection of plants may locate it in places between the Kankakee river and this southern range, and forms may be found which will closely connect the two.

ARENARIA PATULA Michx.—This little sandwort has in part

¹ For the first paper see BOT. GAZ. 17: 246. Ag. 1892.

a similar distribution and history. Originally described by Michaux with a habitat "in rupibus circa *Knoxville*,"² it was afterwards discovered in Kentucky by Dr. Short, and in the mountains of Virginia by Prof. Ruffner, and traced to Arkansas and Texas by Nuttall, Dr. Pitcher, Drummond and others (as *A. Pitcheri*). About 1870 Prof. H. H. Babcock detected it on the limestone formations of the Des Plaines river at Riverside just west of Chicago.³ It occurs in considerable abundance in some localities of limestone within the city limits near Windsor Park and on Stony Island, and also beyond them at Lamont on the Des Plaines. It is reported from one locality, Tippecanoe co., Ind.,⁴ between these stations in Illinois and its southern range.

THASPIUM BARBINODE Nutt.—This quite often has puberulent fruit, so much so that the figures of the fruit given in Coulter and Rose's "Notes on the Umbelliferæ of the United States,"⁵ though true as to the wings, do not cover these cases. This is specially the case with plants on the opposite shore of Lake Michigan at Benton Harbor, Mich. In these the intervals of the ribs are strongly puberulent with short, blunt hairs, much as in *T. pinnatifidum*.

ECHINACEA ANGUSTIFOLIA DC.—Found on a small prairie east of Durham, a station on the L. S. & M. S. R. R., in LaPorte co., Ind. As but a few plants were seen beside the road-bed it may possibly be an introduced plant, though more probably native, as such survivals are found in railway enclosures within cultivated districts. The range of the species is rather from Wisconsin and Illinois west and south, but it has been found as far east as Keweenaw co., Mich., about the same distance east as this station in Indiana. The farthest east I had previously seen it was on prairies east of Kankakee, Ill.

HELIANTHUS ANNUUS L.—The introduced plant native at the west was reported in my previous article as growing in the dump from stock trains west of the city in 1891. The following year it had appeared as a weed under the same conditions of growth along railroads east of the city at Roby, Ind., and is now well established in this locality by the shores of Lake Michigan.

² *Flora Bor. Amer.* 1: 273. 1803.

³ *Flora of Chicago and vicinity.* The *Lens* 1: 23. 1872.

⁴ *Catalogue of the plants of Indiana by the Editors of the Bot. Gaz.* 1881.

⁵ *BOT. GAZ.* 12: 136. *pl. 5. figs. 59, 60.* Je. 1887.

MYOSOTIS LAXA Lehm.—The range of this plant is given in the last edition of Gray's Manual as "Newf. to N. Y." Specimens of a *Myosotis* sent for identification some years ago from Painesville, Ohio, led me to expect its presence there, and the recent Catalogue of Ohio Plants by Kellerman and Werner mentions it as "frequent in marshes and wet places in northern Ohio."⁶ Last summer I found it in abundance in the wet ground bordering the Calumet river near Dune Park, Porter co., Ind. The discovery of this plant in a region that had been quite well explored botanically might indicate that it is an introduction. If a recent comer it had better be considered an escape from gardens, being cultivated for *M. palustris*, of which it has been made a variety by some. Residents to whom the plant was shown called it Forget-me-not. But it is more probably a native that had been overlooked, like some others mentioned in this article. I have found it in the St. Lawrence basin by the Saguenay river, and its range in Canada is given by Macoun as from the lower St. Lawrence to the vicinity of Buffalo, N. Y., so that its connection with the eastern flora is not difficult to make out. There is still much to learn about the details of the geographical distribution of some of the less common plants, and apparent gaps may yet be filled.

CELTIS OCCIDENTALIS L. var. PUMILA Gray.—In 1893 a couple of small hackberries were found near Millers, Ind. They were nearly out of flower (June 6), but were identified as above. They grew near the shore of Lake Michigan, and being but three or four feet high they could not again be found in the wilderness of shrubs and shrubby oaks which characterized this section of the dune region. Last year I came across several more about two miles from the former place, and in a locality not so difficult to keep in mind. This was along the Grand Calumet and near its mouth now silted up with sand. Some of them were large examples of the shrub, the largest stems three inches in diameter, and fifteen feet long. Several ascending stems usually spring from the same root and form clumps about as broad as high. They are very scraggy, the branches thickly set with short, stiff, sub-spinous twigs two or three inches long. They are caused by the winter-killing of the tips, so that the bush, especially when stripped of leaves, resembles a thorn-bush. The habit is so unlike that of the common hackberry, a tree not infre-

⁶Geology of Ohio 7²: 112. [Botany.]

quent in some sections about Chicago, that it is hardly recognized as of the same species. The pointed leaves are usually narrower than in the arboreous hackberry, from narrow ovate to ovate-lanceolate, many of them falcate. Occasionally they are broad and short, both forms occurring on the same stem. The upper third or half of the leaf may be sharply serrate, especially when the leaves are young, but they are often nearly entire, or with a few callous tipped teeth mainly on one margin near the apex. The mature leaves are rather thick and firm in texture. The fruit is globose or a little prolate, one-fourth to one-third of an inch in diameter. When ripe it is of a dark brownish purple color. The flesh is orange colored as well as the stone and seed. There are some features in which it resembles *C. Mississippiensis* Bosc, as in the size of the fruit. This variety of the hackberry is a south Atlantic species, ranging westward, according to Sargent's *Silva of North America* 7: 69, to Missouri, Colorado, Utah and Nevada, and growing on the rocky banks of streams. Here it occurs in the sand of the dune region, near the shores of the lake. I have traced it for a distance of three miles.

ALNUS GLUTINOSA Willd.—This is used in some parts of the city as a shade tree, and has become naturalized in some places south of Jackson Park. It has spread into the wet land, making thickets of low trees and bushes like the common alders. They fruit when at the height of four to six feet.

POTAMOGETON DIVERSIFOLIUS Raf. (*P. hybridus* Michx).—The point nearest the city where I have seen this is Laporte, Ind., where plants grow in shallow pools by the borders of Pine Lake.

P. INTERRUPTUS Kitaibel. Two localities are given for this pondweed in Morong's *Naiadaceæ of North America*:⁷ Manistee, Mich., and the Channel islands, St. Mary's river, Mich. I first came across this plant at Manistee in 1880, near the mouth of the Little Manistee. In 1881 I found it at the latter place. These were mentioned in a contribution to the *BOTANICAL GAZETTE* in 1881.⁸ Later in the same year it was found in the Calumet river at South Chicago. In Higley and Raddin's *Flora of Cook county, Ill.*, and a part of Lake county, Ind.,⁹ this is mentioned as a broad leaved form

⁷Mem. of Torr. Bot. Club, 3: 54. 1893.

⁸l. c. 6: 262. 1881.

⁹Bull. of Chicago Acad. of Sci., 2: 124. 1891.

of *P. pectinatus* but is made identical with those from Michigan, which Dr. Morong subsequently published as *P. interruptus*. Its strong resemblance to *P. flabellatus* Babington, which Dr. Morong makes a synonym of this species, was quite apparent from the first. These three localities seem to be the only undoubted ones from which it has been obtained, though from specimens collected in the Au Sable river, Frankfort, Mich., it may also be present there. The lack of mature fruit, which I have never been able to obtain, leads to considerable difficulty in distinguishing it from forms of *P. pectinatus*. The locality at South Chicago was, soon after its detection there, destroyed by dredging and the building of docks, and with it the hope of getting ripe fruit late in the season near at home. I have examined them as late as the twenty-second of October without finding it. The species is no doubt extant in other localities, especially in northern Michigan.

ELEOCHARIS MELANOCARPA Torr.—Found in 1894 on the sandy borders of Pine lake, Laporte, Ind. Soon after it was detected at Dune Park, where it is quite frequent. It has been considered a maritime plant, its range being near the sea from Plymouth, Mass., to Florida. At Dune Park it grows in the sand bordering sloughs.

SCIRPUS TORREYI Olney.—This was noticed at the same time in sloughs at Dune Park, but is rare. It has not before been reported in Indiana, nor do I know of its presence in Illinois. It is so nearly like *S. pungens* in outward appearance as to be easily overlooked, but in pulling a plant from the wet soil one readily sees the difference.

HOMALOCENCHRUS LENTICULARIS Scribn. (*Leersia lenticularis* Michx.).—South bank of Kankakee river, Kankakee, Starke co., Ind. I do not find it reported elsewhere from Indiana. The locality is but a little north of its northern range in Illinois, Henderson and Peoria counties (Patterson), and is doubtless near its northern limit in Indiana.

EQUISETUM ROBUSTUM Braun.—Bluffs of St. Joseph river, near St. Joseph, Mich. Specimens of this scouring rush were obtained in 1894 growing in the springy soil of the steep banks of the river at a place locally known as Royaltown Heights. This is farther north than I find it given elsewhere. In Illinois it occurs from Peoria southward. Its more usual home is toward the Ohio river.

Chicago, Ill.